

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 December 2004 (29.12.2004)

PCT

(10) International Publication Number
WO 2004/113566 A2

- (51) International Patent Classification⁷: **C12Q 1/68** **LALOWSKI, Maciej** [PL/DE]; Fehrbelliner Str. 39, 10119 Berlin (DE).
- (21) International Application Number: **PCT/EP2004/006617** (74) Agent: **VOSSIUS & PARTNER**; Siebertstrasse 4, 81675 Munich (DE).
- (22) International Filing Date: 18 June 2004 (18.06.2004) (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
03013957.0 20 June 2003 (20.06.2003) EP
- (71) Applicants (for all designated States except US): **MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V.** [DE/DE]; Berlin (DE). **MAX-DELBRÜCK-CENTRUM FÜR MOLEKULARE MEDIZIN (MDC) BERLIN-BUCH** [DE/DE]; Berlin-Buch, Robert-Rössle-Strasse 10, 13092 Berlin (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WANKER, Erich** [AT/DE]; Wolfshagener Strasse 85, 13187 Berlin (DE). **LEHRACH, Hans** [AT/DE]; Terrassenstr. 31, 14129 Berlin (DE). **GÖHLER, Heike** [DE/DE]; Blissestr. 68, 10713 Berlin (DE). **STRÖDICK, Martin** [DE/DE]; Liebenwalder-Str. 34a, 13347 Berlin (DE). **STELZL, Ulrich** [AT/DE]; Greifwalder-Str. 40, 10405 Berlin (DE).
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DISEASE RELATED PROTEIN NETWORK

(57) Abstract: The present invention relates to a method for generating a network of direct and indirect interaction partners of a disease-related (poly)peptide comprising the steps of (a) contacting a selection of (poly)peptides suspected to contain one or several of said direct or indirect interaction partners with said disease-related (poly)peptides and optionally with known direct or indirect interaction partners of said disease-related (poly)peptide under conditions that allow the interaction between interaction partners to occur; (b) detecting (poly)peptides that interact with said disease-related (poly)peptide or with said known direct or indirect interaction partners of said disease-related (poly)peptide; (c) contacting (poly)peptides detected in step (b) with a selection of (poly)peptides suspected to contain one or several (poly)peptides interacting with said (poly)peptides detected in step (b) under conditions that allow the interaction between interaction partners to occur; (d) detecting proteins that interact with said (poly)peptides detected in step (b); (e) contacting said disease related (poly)peptide and optionally said known direct or indirect interaction partners of said disease-related (poly)peptide, said (poly)peptides detected in steps (b) and (d) and a selection of proteins suspected to contain one or several (poly)peptides interacting with any of the afore mentioned (poly)peptides under conditions that allow the interaction between interaction partners to occur; (f) detecting (poly)peptides that interact with said disease-related (poly)peptide and optionally said known direct or indirect interaction partners of said disease-related (poly)peptide or with said (poly)peptides identified in step (b) or (d); and (g) generating a (poly)peptide(poly)peptide interaction network of said disease-related (poly)peptide and optionally said known direct or indirect interaction partners of said disease-related (poly)peptide and said (poly)peptides identified in steps (b), (d) and (f). Moreover, the present invention relates to a protein complex comprising at least two proteins and to methods for identifying compounds interfering with an interaction of said proteins. Finally, the present invention relates to a pharmaceutical composition and to the use of compounds identified by the present invention for the preparation of a pharmaceutical composition for the treatment of Huntington's disease.

WO 2004/113566 A2